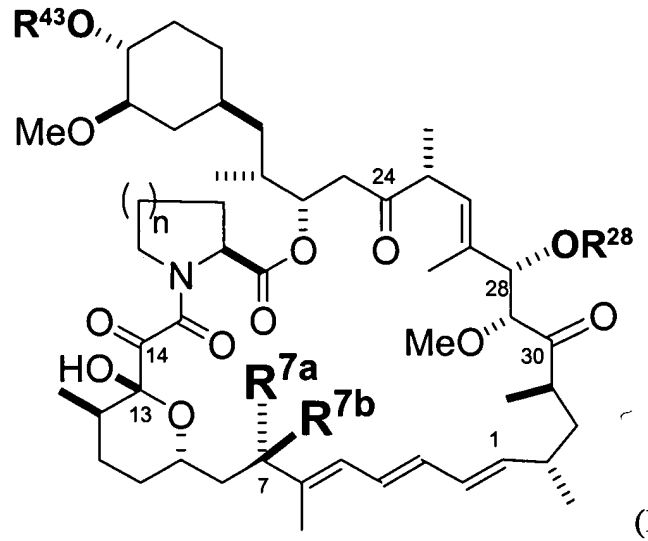
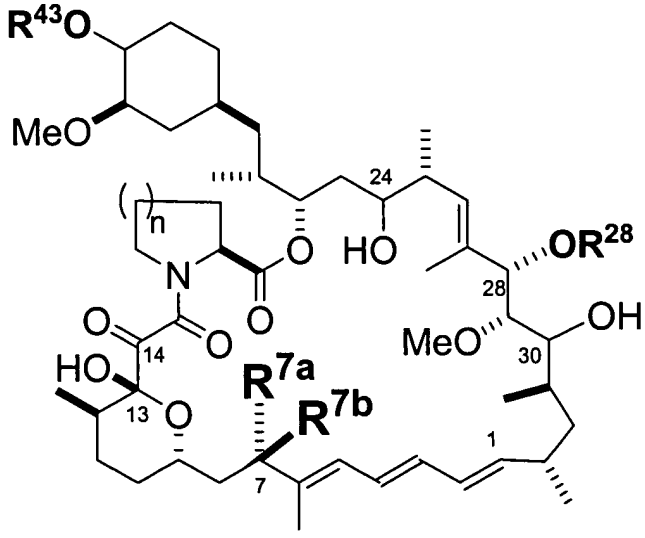
AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions, and listings, of claims in the application.

1. **(Previously presented)** A compound of the formula I or II:



(I)



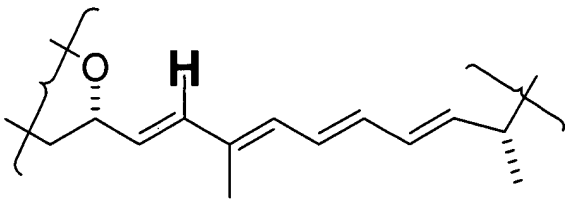
(II)

wherein

n is 1 or 2;

R^{28} and R^{43} are independently selected from the group consisting of H and an aliphatic, acyl, aroyl or heteroaroyl moiety;

one of R^{7a} and R^{7b} is H and the other is halo, $-R^A$, $-OR^A$, $-SR^A$, $-OC(O)R^A$, $-OC(O)NR^AR^B$, $-NR^AR^B$, $-NR^BC(O)R^A$, $-NR^BC(O)OR^A$, $-NR^BSO_2R^A$, $-NR^BSO_2NR^AR^{B'}$ or $-NR^BC(O)NR^AR^{B'}$; or R^{7a} and R^{7b} taken together, are H in the tetraene moiety:



where R^A is H or an aliphatic, heteroaliphatic, aryl, or heteroaryl moiety;
where R^B is H, OH or an aliphatic, heteroaliphatic, aryl, or heteroaryl moiety;
where each aliphatic moiety is an independently chosen saturated or unsaturated, branched or unbranched, cyclic or polycyclic, aliphatic hydrocarbon containing 1-8 contiguous aliphatic carbon atoms;
where each heteroaliphatic moiety is an independently chosen 2-8-membered non-cyclic or 3-10-membered cyclic aliphatic moiety which contains one or more oxygen, sulfur, nitrogen, phosphorous or silicon atoms;
where each aryl moiety is an independently chosen 6-14-membered mono- or polycyclic unsaturated moiety;
where each heteroaryl moiety is an independently chosen 5-6-membered monocyclic or 9-14-membered polycyclic unsaturated moiety which contains one or more oxygen, sulfur or nitrogen atoms; and
where each acyl moiety is an independently chosen -OCR group where R is an aliphatic, heteroaliphatic, aryl, or heteroaryl moiety;
or a pharmaceutically acceptable salt thereof.

2. **(Currently amended)** The compound of claim 1, 78 or 79 wherein n is 2, R^{28} is H, R^{7a} is -OMe, R^{7b} is H and R^{43} is an aliphatic moiety.

3. **(Currently amended)** The compound of claim 1, 78 or 79 wherein R^{7a} is -OMe and R^{7b} is H.

4. **(Currently amended)** The compound of claim 1, 78 or 79 wherein R^{28} is H.

5. **(Currently amended)** The compound of claim 1, 78 or 79 wherein R^{43} is H.

6. **(Currently amended)** The compound of claim 1, 78 or 79 wherein either R^{7a} is a moiety other than -OMe or R^{7b} is a moiety other than H.

7. **(Previously Presented)** The compound of claim 6 wherein one of R^{7a} and R^{7b} is $-NR^BC(O)R^A$, $-NR^BC(O)OR^A$, $-NR^BSO_2R^A$, $-NR^BSO_2NR^AR^{B'}$ or $-NR^BC(O)NR^AR^{B'}$.

8. **(Original)** The compound of claim 7 in which R^B is H, OH or alkyl.

9. **(Currently amended)** The compound of claim 1, 78 or 79 wherein R^{43} is an aliphatic moiety.

10. **(Previously Presented)** The compound of claim 9 wherein R^{43} is an alkyl moiety.

11. **(Currently amended)** The compound of claim ~~10~~ 1, 78 or 79 wherein ~~the alkyl moiety~~ R^{43} is a hydroxyalkyl moiety.

12. **(Previously Presented)** The compound of claim 9 wherein R^{43} is an alkenyl moiety.

13. **(Previously Presented)** The compound of claim 12 wherein the alkenyl moiety is an allyl group.

14. **(Currently amended)** The compound of claim 1, 78 or 79 wherein R^{43} is an acyl moiety.

15. **(Canceled)**

16. **(Previously Presented)** The compound of claim 14 wherein R^{43} is an acyl moiety of the

formula R^AR^BN-alkyl-C(O)-.

17. **(Original)** The compound of claim 2, wherein R^{28} and R^{43} are H, R^{7a} is -OMe, and R^{7b} is H.

18. **(Previously Presented)** The compound of claim 6 wherein n is 2, and R^{28} and R^{43} are H.

19. **(Currently amended)** The compound of ~~any of claims 1, 3-14, 16, 22, 23, 89 or 90~~ claim 1, 78 or 79 wherein n is 2.

20-21. **(Canceled)**

22. **(Currently amended)** The compound of claim 1, 78 or 79 wherein the compound has the formula II in which $-OR^{43}$ is in the S orientation.

23. **(Currently amended)** The compound of claim 1, 78 or 79 wherein the compound has the formula II in which $-OR^{43}$ is in the R orientation.

24-40. **(Canceled)**

41. **(Currently amended)** A composition comprising a compound of ~~any of claims 1-18, 22-23, 89 or 90~~ claim 1, 78 or 79 and one or more pharmaceutically acceptable carriers, diluents or excipients.

42. **(Currently amended)** A method for producing a compound of claim 1, 78 or 79 which comprises contacting a homologous C28 epimer with a titanium tetraalkoxide reagent under suitable conditions and for a sufficient time to permit epimerization.

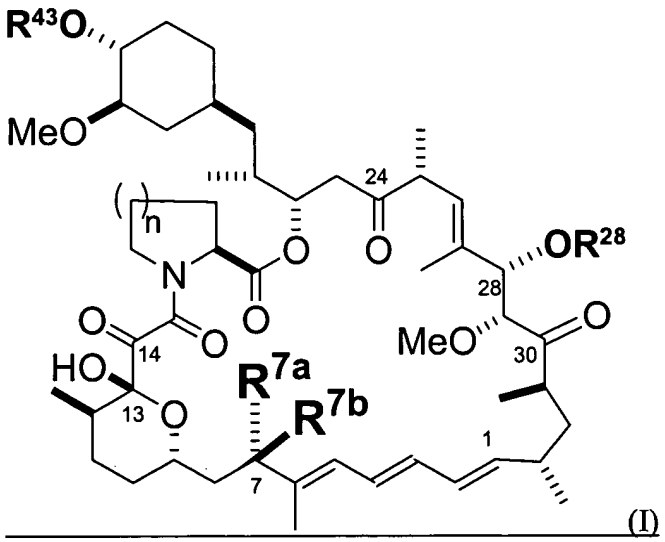
43. **(Original)** The method of claim 42 wherein the titanium tetraalkoxide reagent is titanium tetraisopropoxide.

44. **(Previously Presented)** The method of claim 42 which further comprises recovering the epimerized product.

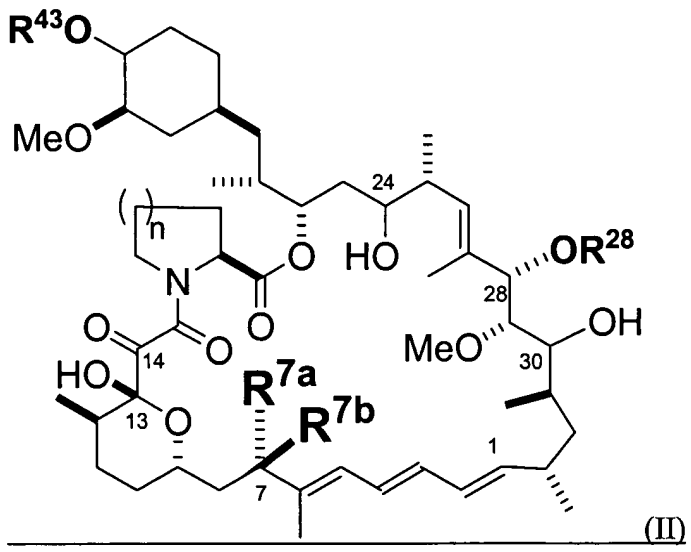
45. **(Currently amended)** The method of ~~any of claims 42-44~~ claim 42 wherein the homologous C28 epimer is rapamycin.

46-77. **(Canceled)**

78. **(Currently amended)** ~~The compound of any of claims 1-18, 22-23, 89 or 90~~ A compound of the formula I or II:



(I)



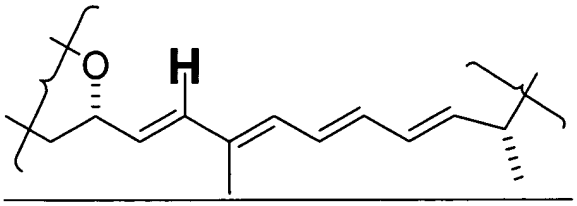
(II)

wherein

n is 1 or 2;

R^{28} and R^{43} are independently selected from the group consisting of H and an aliphatic, acyl, aroyl or heteroaroyl moiety;

one of R^{7a} and R^{7b} is H and the other is halo, $-R^A$, $-OR^A$, $-SR^A$, $-OC(O)R^A$, $-OC(O)NR^AR^B$, $-NR^AR^B$, $-NR^BC(O)R^A$, $-NR^BC(O)OR^A$, $-NR^BSO_2R^A$, $-NR^BSO_2NR^AR^{B'}$ or $-NR^BC(O)NR^AR^{B'}$; or R^{7a} and R^{7b} taken together, are H in the tetraene moiety:



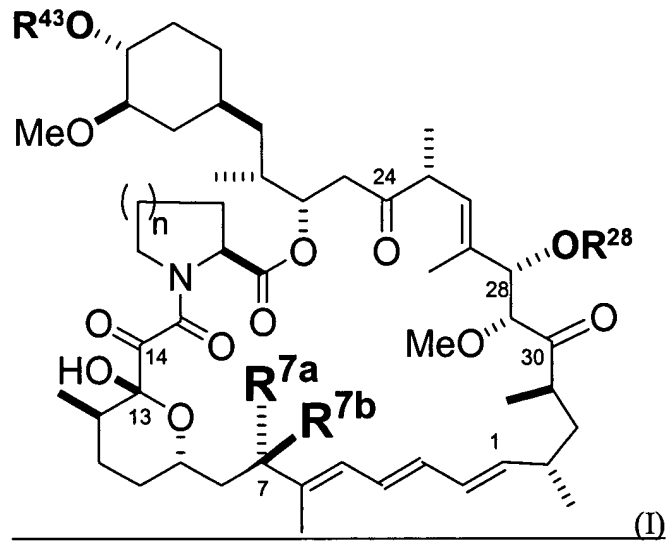
where R^A is H or an aliphatic, heteroaliphatic, aryl, or heteroaryl moiety;

where R^B is H, OH or an aliphatic, heteroaliphatic, aryl, or heteroaryl moiety;

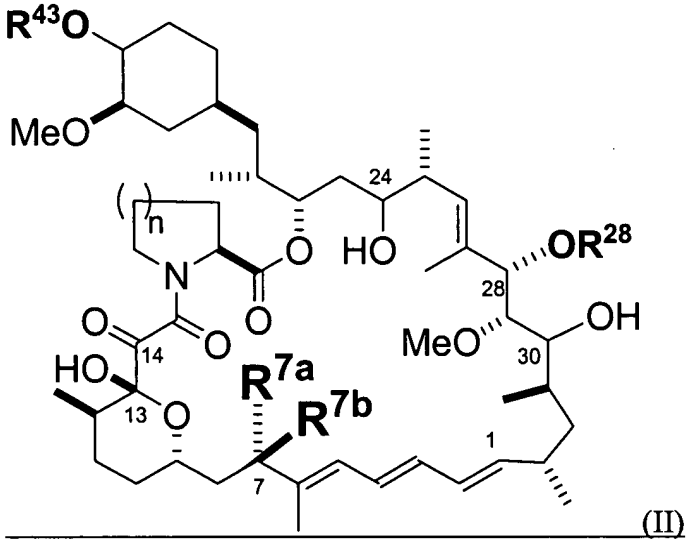
where each aliphatic moiety is an independently chosen saturated or unsaturated, branched or unbranched, cyclic or polycyclic, aliphatic hydrocarbon containing 1-8 contiguous aliphatic carbon atoms;

where each heteroaliphatic moiety is an independently chosen 2-8-membered non-cyclic or 3-10-membered cyclic aliphatic moiety which contains one or more oxygen, sulfur, nitrogen, phosphorous or silicon atoms;
where each aryl moiety is an independently chosen 6-14-membered mono- or polycyclic unsaturated moiety;
where each heteroaryl moiety is an independently chosen 5-6-membered monocyclic or 9-14-membered polycyclic unsaturated moiety which contains one or more oxygen, sulfur or nitrogen atoms;
where each acyl moiety is an independently chosen -OCR group where R is an aliphatic, heteroaliphatic, aryl, or heteroaryl moiety;
wherein each aliphatic, acyl, aroyl, heteroaroyl, heteroaliphatic, aryl or heteroaryl moiety contains one or more optional substituents selected from the group consisting of -OH, $-OR^2$, -SH, $-SR^2$, -CHO, =O, -COOH (or ester, carbamate, urea, oxime or carbonate thereof), $-NH_2$ (or substituted amine, amide, urea, carbamate or guanidino derivative thereof), halo, trihaloalkyl, cyano, $-SO_2-CF_3$, $-OSO_2F$, $-OS(O)_2R^{11}$, $-SO_2-NHR^{11}$, $-NHSO_2-R^{11}$, sulfate, sulfonate, aryl and heteroaryl moieties;
where R^2 is an aliphatic, heteroaliphatic, aryl, heteroaryl or alkylaryl moiety; and
where R^{11} is H or an aliphatic, heteroaliphatic, aryl or heteroaryl moiety;
or a pharmaceutically acceptable salt thereof.

79. **(Currently amended)** ~~The compound of any of claims 1-18, 22-23, 89 or 90~~ A compound of the formula I or II:



(I)



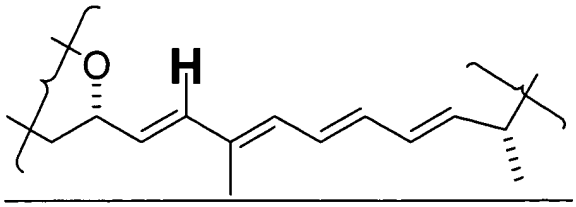
(II)

wherein

n is 1 or 2;

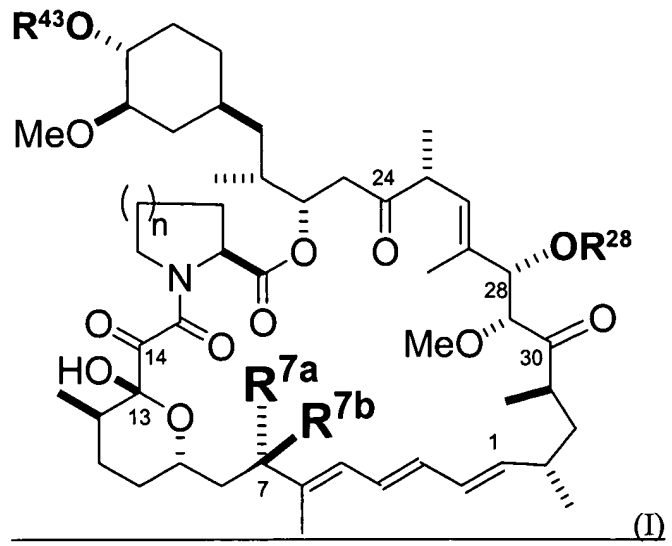
R^{28} and R^{43} are independently selected from the group consisting of H and an aliphatic, acyl, aroyl or heteroaroyl moiety;

one of R^{7a} and R^{7b} is H and the other is halo, $-R^A$, $-OR^A$, $-SR^A$, $-OC(O)R^A$, $-OC(O)NR^AR^B$, $-NR^AR^B$, $-NR^BC(O)R^A$, $-NR^BC(O)OR^A$, $-NR^BSO_2R^A$, $-NR^BSO_2NR^AR^{B'}$ or $-NR^BC(O)NR^AR^{B'}$; or R^{7a} and R^{7b} taken together, are H in the tetraene moiety:

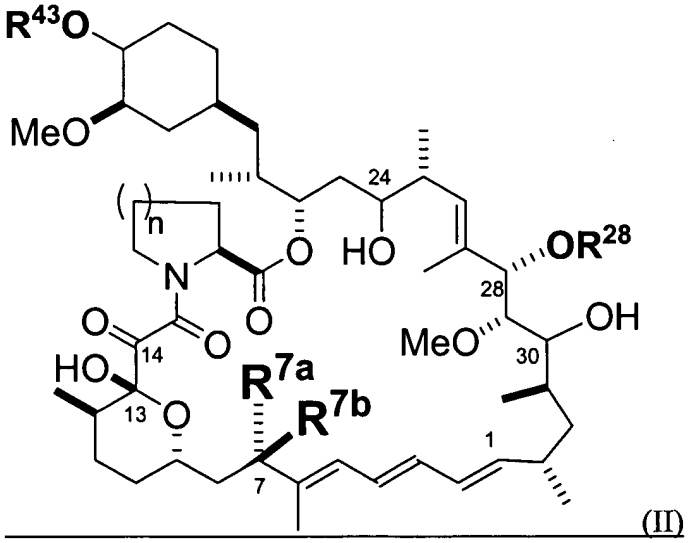


where R^A is H or an aliphatic, heteroaliphatic, aryl, or heteroaryl moiety;
where R^B is H, OH or an aliphatic, heteroaliphatic, aryl, or heteroaryl moiety;
where each aliphatic moiety is an independently chosen saturated or unsaturated, branched or unbranched, cyclic or polycyclic, aliphatic hydrocarbon containing 1-8 contiguous aliphatic carbon atoms;
where each heteroaliphatic moiety is an independently chosen 2-8-membered non-cyclic or 3-10-membered cyclic aliphatic moiety which contains one or more oxygen, sulfur, nitrogen, phosphorous or silicon atoms;
where each aryl moiety is an independently chosen 6-14-membered mono- or polycyclic unsaturated moiety;
where each heteroaryl moiety is an independently chosen 5-6-membered monocyclic or 9-14-membered polycyclic unsaturated moiety which contains one or more oxygen, sulfur or nitrogen atoms;
where each acyl moiety is an independently chosen -OCR group where R is an aliphatic, heteroaliphatic, aryl, or heteroaryl moiety;
wherein each aroyl, heteroaroyl, aryl or heteroaryl moiety contains one or more optional substituents selected from the group consisting of hydroxy, C1-C8 alkoxy, C1-C8 branched or straight-chain alkyl, acyloxy, carbamoyl, amino, N-acylamino, nitro, halo, trihalomethyl, cyano, and carboxyl;
or a pharmaceutically acceptable salt thereof.

80. **(Currently amended)** ~~The compound of any of claims 10, 12 or 14~~ A compound of the formula I or II:



(I)



(II)

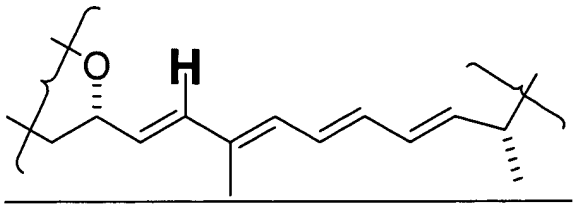
wherein

n is 1 or 2;

R^{28} is selected from the group consisting of H and an aliphatic, acyl, aroyl or heteroaroyl moiety;

R^{43} is an alkyl, alkenyl or acyl moiety;

one of R^{7a} and R^{7b} is H and the other is halo, $-R^A$, $-OR^A$, $-SR^A$, $-OC(O)R^A$, $-OC(O)NR^AR^B$, $-NR^AR^B$, $-NR^BC(O)R^A$, $-NR^BC(O)OR^A$, $-NR^BSO_2R^A$, $-NR^BSO_2NR^AR^{B'}$ or $-NR^BC(O)NR^AR^{B'}$; or R^{7a} and R^{7b} taken together, are H in the tetraene moiety:



where R^A is H or an aliphatic, heteroaliphatic, aryl, or heteroaryl moiety;
where R^B is H, OH or an aliphatic, heteroaliphatic, aryl, or heteroaryl moiety;
where each aliphatic moiety is an independently chosen saturated or unsaturated, branched or unbranched, cyclic or polycyclic, aliphatic hydrocarbon containing 1-8 contiguous aliphatic carbon atoms;
where each heteroaliphatic moiety is an independently chosen 2-8-membered non-cyclic or 3-10-membered cyclic aliphatic moiety which contains one or more oxygen, sulfur, nitrogen, phosphorous or silicon atoms;
where each aryl moiety is an independently chosen 6-14-membered mono- or polycyclic unsaturated moiety;
where each heteroaryl moiety is an independently chosen 5-6-membered monocyclic or 9-14-membered polycyclic unsaturated moiety which contains one or more oxygen, sulfur or nitrogen atoms;
where each acyl moiety is an independently chosen -OCR group where R is an aliphatic, heteroaliphatic, aryl, or heteroaryl moiety;
wherein each alkyl, alkenyl or acyl moiety contains one or more optional substituents selected from the group consisting of -OH, $-OR^2$, -SH, $-SR^2$, -CHO, =O, -COOH (or ester, carbamate, urea, oxime or carbonate thereof), $-NH_2$ (or substituted amine, amide, urea, carbamate or guanidino derivative thereof), halo, trihaloalkyl, cyano, $-SO_2-CF_3$, $-OSO_2F$, $-OS(O)_2R^{11}$, $-SO_2-NHR^{11}$, $-NHSO_2-R^{11}$, sulfate, sulfonate, aryl and heteroaryl moieties;
where R^2 is an aliphatic, heteroaliphatic, aryl, heteroaryl or alkylaryl moiety; and
where R^{11} is H or an aliphatic, heteroaliphatic, aryl or heteroaryl moiety;
or a pharmaceutically acceptable salt thereof.

81. **(Previously presented)** 28-epirapamycin or a pharmaceutically acceptable salt thereof.

82. **(Previously presented)** 29-epirapamycin or a pharmaceutically acceptable salt thereof.

83. **(Previously presented)** 28, 29-bis-epirapamycin or a pharmaceutically acceptable salt thereof.

84. **(Currently amended)** ~~The~~ A compound having the structure of 28-epirapamycin, 29-epirapamycin or 28, 29-bis-epirapamycin ~~of any of claims 81-83 in which~~ except that the hydroxyl group at position 43 is replaced with OR^{43} wherein R^{43} is an aliphatic, acyl, aroyl or heteroaroyl moiety;
where an aliphatic moiety is a saturated or unsaturated, branched or unbranched, cyclic or polycyclic, aliphatic hydrocarbon containing 1-8 contiguous aliphatic carbon atoms;
where a heteroaliphatic moiety is a 2-8-membered non-cyclic or 3-10-membered cyclic aliphatic moiety which contains one or more oxygen, sulfur, nitrogen, phosphorous or silicon atoms;
where an aryl moiety is a 6-14-membered mono- or polycyclic unsaturated moiety;
where a heteroaryl moiety is a 5-6-membered monocyclic or 9-14-membered polycyclic unsaturated moiety which contains one or more oxygen, sulfur or nitrogen atoms; and
where an acyl moiety is an -OCR group where R is an aliphatic, heteroaliphatic, aryl, or heteroaryl moiety;
or a pharmaceutically acceptable salt thereof.

85. **(Currently amended)** ~~The compound of claim 84~~ A compound having the structure of 28-epirapamycin, 29-epirapamycin or 28, 29-bis-epirapamycin except that the hydroxyl group at position 43 is replaced with OR^{43} wherein R^{43} is an aliphatic, acyl, aroyl or heteroaroyl moiety;
where an aliphatic moiety is a saturated or unsaturated, branched or unbranched, cyclic or polycyclic, aliphatic hydrocarbon containing 1-8 contiguous aliphatic carbon atoms;
where a heteroaliphatic moiety is a 2-8-membered non-cyclic or 3-10-membered cyclic aliphatic moiety which contains one or more oxygen, sulfur, nitrogen, phosphorous or silicon atoms;
where an aryl moiety is a 6-14-membered mono- or polycyclic unsaturated moiety;
where a heteroaryl moiety is a 5-6-membered monocyclic or 9-14-membered polycyclic unsaturated moiety which contains one or more oxygen, sulfur or nitrogen atoms;

where an acyl moiety is an -OCR group where R is an aliphatic, heteroaliphatic, aryl, or heteroaryl moiety;

wherein each aliphatic, acyl, aroyl or heteroaroyl moiety contains one or more optional substituents selected from the group consisting of -OH, $-OR^2$, -SH, $-SR^2$, -CHO, =O, -COOH (or ester, carbamate, urea, oxime or carbonate thereof), $-NH_2$ (or substituted amine, amide, urea, carbamate or guanidino derivative thereof), halo, trihaloalkyl, cyano, $-SO_2-CF_3$, $-OSO_2F$, $-OS(O)_2R^{11}$, $-SO_2-NHR^{11}$, $-NHSO_2-R^{11}$, sulfate, sulfonate, aryl and heteroaryl moieties;

where R^2 is an aliphatic, heteroaliphatic, aryl, heteroaryl or alkylaryl moiety; and

where R^{11} is H or an aliphatic, heteroaliphatic, aryl or heteroaryl moiety;

or a pharmaceutically acceptable salt thereof.

86. **(Currently amended)** ~~The compound of claim 84~~ A compound having the structure of 28-epirapamycin, 29-epirapamycin or 28, 29-bis-epirapamycin except that the hydroxyl group at position 43 is replaced with OR^{43} wherein R^{43} is an aliphatic, acyl, aroyl or heteroaroyl moiety;

where an aliphatic moiety is a saturated or unsaturated, branched or unbranched, cyclic or polycyclic, aliphatic hydrocarbon containing 1-8 contiguous aliphatic carbon atoms;

where a heteroaliphatic moiety is a 2-8-membered non-cyclic or 3-10-membered cyclic aliphatic moiety which contains one or more oxygen, sulfur, nitrogen, phosphorous or silicon atoms;

where an aryl moiety is a 6-14-membered mono- or polycyclic unsaturated moiety;

where a heteroaryl moiety is a 5-6-membered monocyclic or 9-14-membered polycyclic unsaturated moiety which contains one or more oxygen, sulfur or nitrogen atoms;

where an acyl moiety is an -OCR group where R is an aliphatic, heteroaliphatic, aryl, or heteroaryl moiety;

wherein each aroyl or heteroaroyl moiety contains one or more optional substituents selected from the group consisting of hydroxy, C1-C8 alkoxy, C1-C8 branched or straight-chain alkyl, acyloxy, carbamoyl, amino, N-acylamino, nitro, halo, trihalomethyl, cyano, and carboxyl;

or a pharmaceutically acceptable salt thereof.

87. **(Currently amended)** ~~The compound of claim 84~~ A compound having the structure of 28-epirapamycin, 29-epirapamycin or 28, 29-bis-epirapamycin except that the hydroxyl group at position 43 is replaced with OR^{43} wherein R^{43} is an aliphatic, acyl, aroyl or heteroaroyl moiety;

where an aliphatic moiety is a saturated or unsaturated, branched or unbranched, cyclic or polycyclic, aliphatic hydrocarbon containing 1-8 contiguous aliphatic carbon atoms;
where a heteroaliphatic moiety is a 2-8-membered non-cyclic or 3-10-membered cyclic aliphatic moiety which contains one or more oxygen, sulfur, nitrogen, phosphorous or silicon atoms;
where an aryl moiety is a 6-14-membered mono- or polycyclic unsaturated moiety;
where a heteroaryl moiety is a 5-6-membered monocyclic or 9-14-membered polycyclic unsaturated moiety which contains one or more oxygen, sulfur or nitrogen atoms;
where an acyl moiety is an -OCR group where R is an aliphatic, heteroaliphatic, aryl, or heteroaryl moiety;
wherein R^{43} is a hydroxyalkyl moiety that contains one or more optional substituents selected from the group consisting of -OH, $-OR^2$, -SH, $-SR^2$, -CHO, =O, -COOH (or ester, carbamate, urea, oxime or carbonate thereof), $-NH_2$ (or substituted amine, amide, urea, carbamate or guanidino derivative thereof), halo, trihaloalkyl, cyano, $-SO_2-CF_3$, $-OSO_2F$, $-OS(O)_2R^{11}$, $-SO_2-NHR^{11}$, $-NHSO_2-R^{11}$, sulfate, sulfonate, aryl and heteroaryl moieties;
where R^2 is an aliphatic, heteroaliphatic, aryl, heteroaryl or alkylaryl moiety; and
where R^{11} is H or an aliphatic, heteroaliphatic, aryl or heteroaryl moiety;
or a pharmaceutically acceptable salt thereof.

88. **(Currently amended)** ~~The compound of claim 84~~ A compound having the structure of 28-epirapamycin, 29-epirapamycin or 28, 29-bis-epirapamycin except that the hydroxyl group at position 43 is replaced with OR^{43} wherein R^{43} is an aliphatic, acyl, aroyl or heteroaroyl moiety;
where an aliphatic moiety is a saturated or unsaturated, branched or unbranched, cyclic or polycyclic, aliphatic hydrocarbon containing 1-8 contiguous aliphatic carbon atoms;
where a heteroaliphatic moiety is a 2-8-membered non-cyclic or 3-10-membered cyclic aliphatic moiety which contains one or more oxygen, sulfur, nitrogen, phosphorous or silicon atoms;
where an aryl moiety is a 6-14-membered mono- or polycyclic unsaturated moiety;
where a heteroaryl moiety is a 5-6-membered monocyclic or 9-14-membered polycyclic unsaturated moiety which contains one or more oxygen, sulfur or nitrogen atoms;
where an acyl moiety is an -OCR group where R is an aliphatic, heteroaliphatic, aryl, or heteroaryl moiety;

wherein R^{43} is an acyl moiety that contains one or more optional substituents selected from the group consisting of -OH, $-OR^2$, -SH, $-SR^2$, -CHO, =O, -COOH (or ester, carbamate, urea, oxime or carbonate thereof), $-NH_2$ (or substituted amine, amide, urea, carbamate or guanidino derivative thereof), halo, trihaloalkyl, cyano, $-SO_2-CF_3$, $-OSO_2F$, $-OS(O)_2R^{11}$, $-SO_2-NHR^{11}$, $-NHSO_2-R^{11}$, sulfate, sulfonate, aryl and heteroaryl moieties;
where R^2 is an aliphatic, heteroaliphatic, aryl, heteroaryl or alkylaryl moiety; and
where R^{11} is H or an aliphatic, heteroaliphatic, aryl or heteroaryl moiety;
or a pharmaceutically acceptable salt thereof.

89. (**Currently amended**) The compound of claim 1, 78 or 79, wherein the compound has the formula I.

90. (**Currently amended**) The compound of claim 1, 78 or 79, wherein the compound has the formula II.